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THE JOINT NEWSLETTER OF THE THREE TIMEX-SINCLAIR
USER GROUPS IN THE SAN FRANCISCO BAY AREA
** EBZUG PUG SVSTUG **

GOOD NEWS

JACK DOHANEY HAS DEVELOPED A VERSION OF MSCRIPT WHICH NOT ONLY DRIVES AN 80-COLUMN PRINTER BUT WHICH INCLUDES THE FOLLOWING PATCHES:

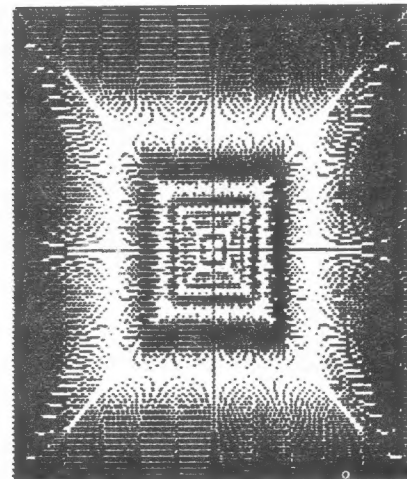
1. OPTION FOR FAT LETTERS,
2. OPTIONS FOR PAPER COLOR,
3. RETURN TO CURRENT MSCRIPT,
4. COLD START FOR MSCRIPT,
5. PROGRAM UTILITY ROUTINE,
6. A "STOP" (TO BASIC), AND
7. ALLOW FOR BACKUP COPIES.

IN ADDITION, HE HAS REASSIGNED THE KEYS FOR A MUCH BETTER CONTROL OF THE CURSOR AND FOR EASIER USE OF THE DELETION FUNCTION.

FOR FURTHER INFORMATION, CONTACT:

JACK DOHANEY
325 O'CONNOR STREET
MENLO PARK, CA 94025
(415) 321-7684

TRY THIS



```
5 INK 9: LET r=RND*7: PAPER r
: BORDER r
10 OVER 1
14 LET r=INT (RND*9)+1
15 PRINT r
20 FOR s=-84 TO 84 STEP r
26 PLOT 127,87: DRAW s,85
27 PLOT 127,87: DRAW 85,s
28 PLOT 127,87: DRAW -85,s
29 PLOT 127,87: DRAW s,-85
30 NEXT s
40 PAUSE 100: CLS : GO TO 5
50 SAVE "pat" LINE 1
```

***** CHANGE OF ADDRESS!

SVSTUG and Rita Carr's
Newsletter Exchange have
changed their address!

The new address is:

SVSTUG
& Rita Carr's Newsletter
Exchange
C/O Bill Miller
6675 Clifford Drive
Cupertino, CA 95014-4530

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VU-CALC for the AERCO CENTRONICS PRINTER I/F and 80 COLUMN PRINTERS

by Pat Morrissey

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As promised, here are the program lines to make the Psion Software Program VU-CALC work with your AERCO Centronics Interface and "80 Column" Printer to give you full page width presentation for your data.

Required hardware and software are:

1. T/S 2068 Computer
2. AERCO Centronics Printer I/F
3. 80 Column Printer
4. Tape Recorder
5. VU-CALC
6. AERCO printer driver software -
Version 2.1 - (See Note a) below.)

Below are the Basic program lines which are to be MERGED with the Basic portion of VU-CALC. Before proceeding, I suggest you read the article for the Tasman. Also, it might be a good idea to have your documentation for the AERCO driver available for reference, if needed. Use the same procedure as listed for the Tasman version (as summarized here) with the exceptions as noted:

1. Reset computer. Key in the lines listed herein.
2. SAVE and VERIFY them on any blank cassette.
3. Reset computer. MERGE the Basic part of VU-CALC to prevent the program from AUTO-STARTing.
4. LIST the VU-CALC Basic. MERGE in the previously SAVED lines from 1 & 2 above.
5. LIST the result. Then SAVE "vcalcP" LINE 10 on a new tape and VERIFY. This will be your actual working tape.
6. Reset computer. Place the commercial VU-CALC tape in the recorder and use the immediate command LOAD "" CODE 40000,6912:LOAD "" CODE 29328,5225. Play the other two parts of VU-CALC into the computer. Rewind the commercial tape and put it away.
7. Now replace the tape with "vcalcP" and get to the end of the Basic you just recorded. Leaving a few seconds after the Basic, SAVE "s" CODE 40000,6912. VERIFY. Now following this on the tape, SAVE "vc" CODE 29328,5225 and VERIFY.
8. Now put your tape containing the AERCO Printer driver (V 2.1) into the recorder. LOAD "" CODE 64456,1111. Rewind this tape and put it away.
9. Put your "vcalcP" tape back in and a few seconds past the end of "vc", SAVE "a" CODE 64456,1111 and VERIFY.

That's it! Now, reset the computer and use LOAD"" to test the program for proper operation.

NOTES:

- a) According to AERCO, Version 2.1 of their Printer Driver Program is the current version and the one in the widest distribution. However, there are older versions (V2.0 ?) which load to Address 64256 (200 lower than V2.1). If you have one of these older versions, try reducing all POKE addresses in the lines below by 200, with the exception of LINE 41, where the POKEs should be: 26703,5: 26704,251 : 64260,10.
- b) Like the Tasman version of VU-CALC, the AERCO version was written for use with the Star S6-10, but will also drive most other printers (including "136 Column" printers like the S6-15 and Epson FX-100) with minor changes.
- c) The AERCO version requires a few more Basic commands than the Tasman version. This is why you see more extensive use of the memory-saving "VAL" function. Again, I have not put in the usual REMark lines to properly document the revisions internally. I present here the notes which have been omitted from the program to conserve memory:

- 40 Sets z=0 and shuts off screen copy via "LPRINT CHR\$ 1".
- 41 Sets up call to "Printer Driver on LPRINT" and "Line Feed with Carriage Return".
- 42 Sets width (34) for title.
- 43 Sets "Expanding Mode" for printing.
- 51 Initialize left margin to 0.
- 53 Commands "One line expanded print", prints a\$ (title).
- 54 Sets print width (136) for table.
- 60 Commands "Condensed print."
- 63 Commands "Set left margin = s".
- 69 Checks for more columns than will fit sheet. If you choose a print font other than "condensed" (17 cpi) you will likely want to change this the number 18 to a smaller value. It is also where you would put in a larger value for a "136 Column" printer.
- 73-80 and 173-180 print the column numbers at the top and bottom of the hard copy.
- 120-160 The data "fetch"/LPRINT routine.
- 180 Commands "Pica print" (Stops Condensed).
- 2000 Disables the "#p" command (same as Tasman.)

The AERCO MERGE Program Lines for "vcalcP"
(c)1985 C.P. Morrissey. All rights reserved.

```

10 CLEAR VAL "29327": BORDER LN PI : PAPER LN PI
: INK LN PI : CLS : LOAD "" SCREEN: LOAD "" CODE : L
OAD "" CODE : GO TO VAL "3200"
40 LET z= VAL "0": POKE VAL "64463",z: POKE VAL "644
64",z: POKE VAL "64465",z
41 POKE VAL "26703", VAL "205": POKE VAL "26704", VA
L "251": POKE VAL "64460", VAL "10"
42 POKE VAL "64459", VAL "33"
43 POKE VAL "64456",z
51 LPRINT CHR$ VAL "27": CHR$ VAL "77": CHR$ z;
52 INPUT "Title: "a$
53 LPRINT CHR$ VAL "14": " "a$
54 POKE VAL "64459", VAL "135"
60 LPRINT CHR$ VAL "15";
61 LPRINT CHR$ VAL "10"
62 INPUT "Left Margin (Condensed) ";s
63 LPRINT CHR$ VAL "27": CHR$ VAL "77": CHR$ s;
68 INPUT "Start Column ":n: IF n< VAL "1" THEN LET n=
VAL "1"
69 INPUT "Finish Column ":m: IF m>(n+ VAL "18")-( INT (
(s+ VAL "6")/ VAL "7")) THEN LET m=n+ VAL "18")-( INT (
(s+ VAL "6")/ VAL "7"))
70 INPUT "Start Line ":q: IF q< VAL "1" THEN LET q= V
AL "1"
71 INPUT "Finish Line ":r: IF r> VAL "50" THEN LET r=
VAL "50"
72 POKE VAL "64456", VAL "1": IF m> VAL "50" THEN LE
T m= VAL "50"
73 FOR a= VAL "1" TO (m-n+ VAL "1")
75 LPRINT TAB ( VAL "2"+(a* VAL "7")- LEN STR$ (a+n-
VAL "1"))a+n- VAL "1";
80 NEXT a
85 LPRINT
120 FOR i=((q- VAL "1")* VAL "350") TO ((r- VAL "1")* V
AL "350") STEP VAL "350"
125 LPRINT CHR$ VAL "32";
130 FOR k=((n- VAL "1")* VAL "7") TO VAL "350"
140 LPRINT CHR$ PEEK ( VAL "34573"+k+i);
145 IF k=((m* VAL "7")- VAL "1") THEN LET k= VAL "350"
: POKE VAL "64456",z: LPRINT CHR$ VAL "13": POKE VA
L "64456", VAL "1"
150 NEXT k
152 LPRINT
160 NEXT i
173 FOR a= VAL "1" TO (m-n+ VAL "1")
175 LPRINT TAB (1+(a* VAL "7")- LEN STR$ (a+n- VAL "1
"))a+n- VAL "1";
178 NEXT a
79 LPRINT CHR$ VAL "13"
180 POKE VAL "64456",z: LPRINT CHR$ VAL "18"
185 POKE VAL "64456", VAL "1"
190 RETURN
2000 GO TO USR e3
3000 GO SUB VAL "1200": PRINT AT VAL "9", VAL "2": "EN
TER 1 : EXIT PROGRAM"" TAB VAL "9": "2 : CLEAR WORKSHE
ET"" TAB VAL "9": "3 : RETURN TO VU-CALC"" TAB VAL "9
": "4 : PRINTOUT": INPUT "OPTION? ";a

```

```

3010 IF a> VAL "0" AND a< VAL "5" THEN GO TO ( VAL "300
0"+a* VAL "100")
3200 CLEAR VAL "29327": DIM b$( VAL "100"): DIM c$( VAL
"20"): GO SUB VAL "1200"
3400 CLS : GO SUB VAL "40": GO TO VAL "3000"
4000 GO SUB VAL "1100": SAVE a$ CODE zz,( PEEK bfre+ VA
L "256"* PEEK (bfre+ VAL "1")-zz): CLS : PRINT AT 5,1:"
Rewind and Play Tape to Verify""GO TO 3000 on ERROR a
nd ReSAVE": VERIFY "" CODE : CLS : GO TO USR e2

```

Like the Tasman version, this program is also available via modem if you want to call.

Thanks for help on the AERCO version go to Jerry Chamkis of AERCO and Jack Dohany for information on the earlier versions of the AERCO printer driver software. Again, please send any bugs to:

C.P.Morrissey (415) 952-5068 (Voice)
2000 Crystal Springs Road
Bldg 21, Apt 22
San Bruno, CA 94066

A T T E N T I O N

YOU HAVE HEARD THIS PLEA BEFORE.
WELL...HERE IT IS AGAIN!!!

THIS IS YOUR NEWSLETTER. IT WILL
ONLY BE AS GOOD AS YOU MAKE IT.

CONTRIBUTE AN ARTICLE OR AN ITEM
FOR PUBLICATION.

* REVIEWS OF HARDWARE
* REVIEWS OF SOFTWARE
* REVIEWS OF BOOKS
* A PROJECT YOU ARE WORKING ON
* TECHNIQUES AND TIPS
* WHATEVER

WRITE ABOUT IT AND SHARE IT WITH
YOUR USER GROUP FRIENDS!!!

GET IT TO YOUR GROUP EDITOR BY THE
1st OF SEPTEMBER FOR POSSIBLE INCLU-
SION IN THE SEPTEMBER ISSUE.

DON'T JUST SIT THERE...

D O I T !

FROM THE LONDON SUNDAY TIMES.

Timex hits at Sinclair

by Jane Bird and Peter Kingston

TROUBLED Sinclair Research has suffered a further blow with the discovery that Timex, the subcontractor which assembles most of its computers, is selling them abroad - and undercutting it on price.

Timex believes that its contract allows it to do this if Sinclair falls behind with payments. The Dundee-based assembler and Sinclair's other prime contractor, Thorn EMI, are together believed to be owed around £10m, though both have agreed to extend credit by two months.

Timex has approached Zeta Marketing of Manchester and asked it to dispose of an initial 65,000 Spectrums overseas. Zeta is offering these at a trade price of £71, around £16 less than Sinclair. The machine retails for £129.95.

Potential investors in Sinclair are expected to demand the introduction of some strong new senior management. The company is already looking for a chief executive so that Sir Clive could step down from the post and remain as chairman. But troubleshooting chief executives for troubled micro companies are proving hard to find - Acorn has been looking for several months without success. One obvious candidate, Robb Wilmot, has already joined forces with Sinclair for an ambitious chip project. The possibility that he might accept a full-time post has been denied by Wilmot, who is chairman of ICL, Britain's largest main-frame computer maker.

Loading Tasword II on the A & J Microdrive

Using the A & J Microdrive to load Tasword II takes less than 30 seconds! But to SAVE the program and files created by it requires some modifications to the BASIC part of Tasword II.

To make the changes, LOAD Tasword off tape and choose the BASIC option. DELETE lines 11, 15, 700 and 710. Now add the following lines:

```
15 POKE VAL "23609", VAL "2": CLEAR
VAL "33279": GO SUB VAL "4000":
LOAD "@tasword"CODE: CLS: LET a=USR
VAL "59061": GO TO VAL "10"
```

```
700 CLS: LET a$="@tasword": SAVE
"@1,tasword"LINE 15
```

```
710 SAVE "@2,tasword"CODE 54784,
10751
```

```
1060 IF a$(1)<>"@" THEN GO TO 1100
```

```
1070 LET a$(2 TO )=a$(4 TO )
```

These changes allow you to use either cassette or microdrive for saving files. Just remember to begin files for the microdrives with @ and the number of the file followed by a comma and the file name up to 7 characters long. Files without the @ will save to the cassette. (Example: @1,sample)

To SAVE Tasword to microdrive after the above changes GO TO 1 and then select the "Save Tasword" option. Save it on a 20" cartridge with no other files on it.

To LOAD Tasword, type LOAD "@tasword" RETURN.

-- Joe Williamson

FROM THE
APRIL SUN
N/L OF
GAINSVILLE,
FLORIDA.

HOT BASIC no.1

Have you ever wished the INKEY\$ function could be used to check for a combination of two keys depressed at once?

Take heart, there is a nice way around this problem. The SYSTEM VARIABLE called LAST_K, located at 16421-16422, returns a unique numeric value between 0 and 65535 for any key pressed, and also for just about any multi-key combination!

Therefore, in a program, you can use

PEEK 16421+256*PEEK 16422 instead of INKEY\$. A practical example might be using this to get a "diagonal" result by pressing two cursor keys at once.

This short listing will let you find values for different combinations of keys, and see how the principle works.

```
10 PRINT AT 5,0;"PRESS A KEY COMBINATION."
```

```
20 PRINT AT 9,5;"CURRENT LAST-K VALUE"
```

```
30 LET K= PEEK 16421+256* PEEK 16422
```

```
40 PRINT AT 10,10;" "; AT 10,10; K
```

```
50 GOTO 30
```

ZX81/TS1000
TIPS FROM
THE MAY/JUNE
1985 SINC-
LINK N/L OF
TORONTO.

Note: In LINE 40, 5 spaces between the quotes. You can record the values you get for use in your own programs. Note that the "current" value is shown ONLY while you have the key(s) depressed.

HOT BASIC no.2

Here is another example of How It Pays To Know Your System Variables.

The infamous 0 REN machine code line can cause problems if it has had the two "NEWLINE" codes POKED in to make the machine code disappear from the listing. You may find that while you can LIST a different line number, if you ENTER a new line, or do some EDITing, that 0 REN keeps popping up again and again. Very distracting, isn't it?

We can fix the problem by POKing the SYSTEM VARIABLE called S_TOP, at 16419. It holds the value of the top line number in automatic listings. To do it, first determine the line number of the first "normal" BASIC line after the machine code. For our example, let's say this is line 5. Follow these steps:

```
LIST 9999 & ENTER
```

```
POKE 16419,5 & ENTER
```

```
LIST 5 & ENTER
```

Voila! So long as you don't get careless and enter "LIST" without a line number, the display listing will behave normally.

This technique can be useful in regular BASIC programming, too. Can you see how?

Aerco Interface with the Spectrum Rom

If you have converted your 2068 to a Spectrum and have the Aerco parallel printer interface, here are the changes needed to run the print driver software supplied with the interface while in Spectrum mode.

First place your computer in Spectrum mode and load in the Aerco print driver software. When loaded, break into BASIC (don't initialize it like the program tells you to do - you'll just crash). Once in

BASIC, LIST line 9992 and EDIT. On line two and three where it says POKE 26704 and POKE 26703, change the 26704 to 23750 and change 26703 to 26749. Press ENTER. In the immediate mode (no line numbers) enter:

```
POKE 64441,201
```

```
POKE 64521,84
```

```
POKE 64522,31
```

Now run the program with GOTO 1 and choose the initialize routine. You are now set up to drive your printer while in Spectrum mode! Be sure you save this new version.

--Joe Williamson

LATEST VENDOR NEWS FROM THE JUNE SUM N/L OF GAINSEVILLE, FLORIDA.

The ENGLISH MICRO CONNECTION has announced the availability of a keyboard overlay made expressly for the TS-2068 of heavy white plastic. It can be marked on and wiped off. Bob Dyl says it will be excellent for M-Script, Omnicalc, or any other software with lots of commands. Cost is \$3.00 each postpaid from EMC, 15 Kilburn Court, Newport, RI 02840.

TS CONNECTION's Jack Roberts has informed SUM that TS Connection did not buy out Timex in Little Rock nor did they take over Timex's service business. Word from Little Rock is that they are still doing repair work. Mr. Roberts says that TS Connection does do out-of-warranty repair service on the Timex computers. Prices are supposed to be reasonable and turn-around time quick. TS Connection, 3832 Watterson, Cincinnati, OH 45227; 513-271-5575.

A new BBS service called TIMEyXCHANGE is now on line with up to the minute news for the Timex/Sinclair computerist. Any TS computer with a modem will be able to log on to this service. Exchanging of messages is also supported. Contact Ed Grey at P.O. Box 2186, Inglewood, CA 90305; call 213/325-0213.

FROM THE RAMTOP N/L IN CLEVELAND, OHIO.

The Computer Widows Corner

Here is a new column just for the "computer widows" out there! This article is from my wife Shirley.

Just a few lines from a computer widow! You've heard of the "foot ball widow" and the "base ball widows", so I thought it was time that we were given some recognition. When the computer comes out there I sit listening to the click click of the keys and the buzzing of the printer. The articles that only were going to take a short time usually turn into hours, so I have my choice, listening to these sounds or finding something else to do. Usually I phone a friend or now that the weather is nice I take a long walk. I thought that many of you wives could relate to this, The Widows of The Greater Cleveland Sinclair Users Group. Let's ban together you widows and start a column of our own! Send your articles, recipes, jokes, or whatever to: SHIRLEY R. DUPUY
6514 Bradley Ave.(DOWN)
Parma, Ohio 44129
Phone: (216) 661-4105

MTERM AND SPECTRUM FROM THE MAY RAMTOP N/L IN CLEVELAND, OHIO.

At last! Now you can use your Spectrum ROM and MTERM without crashing on exiting the MTERM program. It's easy!

Because RAMTOP has to be lowered for MTERM to work with the Spectrum, make this little loader program.

Write this one line program.

```
10 CLEAR 53950: LOAD "" CODE:
RANDOMIZE USA 54016
```

SAVE it using SAVE "MTERM"
LINE 10.

LOAD the original version of MTERM code. Once loaded, add the following POKES.

```
POKE 54554,207: POKE 54555,255
```

SAVE this version on MTERM by entering: SAVE "MTERM" CODE 54016,7721. Save it on the tape you saved the one line program on.

Now LOAD your customized version of MTERM into your Spectrum. The program will autorun, so the loader program can be removed by erasing the buffer.

Now you can exit from MTERM without crashing. When you exit MTERM, the menu will still be on the screen, but a press on the enter key will get your listing.

One word of caution. The buffer controls will say that you have 30211 bytes in your buffer, but only about 30100 is usable. If you put more information than that in the buffer, MTERM will crash.

Thanks to Thomas Simon and Rick Conard for putting me on the right track for this routine.

David Hoshor

Recipe for Pineapple Dream Cake

Ingredients:

- 1- angel food cake
- 1- small pkg. of instant vanilla pudding
- 1- 20 oz can of crushed pineapple WITH the juice!
- 1- med. size bowl of Cool Whip

First bake the angel food cake according to the package instructions. remove it from the mold, and spit it in half. Now mix the above ingredients in a large bowl and frost the cake just as you would a regular cake. This is quick and BOY IS IT GOOD! My husband likes it better than a regular cake!

[Signature]

T/S 2068 BOOKS

UNTIL RECENTLY, THERE HAVE BEEN ONLY EIGHT BOOKS DEVOTED EXCLUSIVELY TO THE TIMEX SINCLAIR 2068 COMPUTER:

- * THE 2068 PERSONAL COMPUTER USER MANUAL, CHARLES DURANG
- * TIMEX SINCLAIR COLOR GRAPHICS, NICK HAMPSHIRE
- * TIMEX SINCLAIR 2068 BEGINNER/INTERMEDIATE GUIDE, FRED BLECHMAN
- * THE TIMEX SINCLAIR 2068, ROGER VALENTINE
- * THE WORKING TIMEX SINCLAIR 2068, DAVID LAWRENCE
- * THE TIMEX SINCLAIR 2068 EXPLORED, TIM HARTNELL
- * TIMEX SINCLAIR 2068 TECHNICAL REFERENCE MANUAL, CORCORAN AND BRANIGIN
- * TIMEX SINCLAIR 2068 INTERMEDIATE/ADVANCED GUIDE, JEFF MAZUR

THERE IS NOW A NINTH BOOK ON THE MARKET:

T/S 2068 BASIC AND BEYOND,
BY SHARON ZARDETTO AKER

THIS NEW BOOK IS DESIGNED FOR BEGINNING AND INTERMEDIATE PROGRAMMERS. IT COVERS THE BASICS OF PROGRAMMING, NUMBERS, FUNCTIONS, STRINGS, GRAPHICS, PEEKS AND POKES, SOUNDS, LOGIC, TIPS, AND TECHNIQUES.

IT IS A VERY THOUGHTFUL BOOK WHICH INCLUDES OVER 120 SHORT PROGRAMS TO ILLUSTRATE ALL OF THE ABOVE SUBJECTS. FOLLOWING ARE SOME EXAMPLES (WITH MINOR REVISIONS) OF THESE MANY PROGRAMS.

IN THE FIRST EXAMPLE, A SELECTED CHARACTER APPEARS IN THE UPPER LEFTHAND CORNER. THEN THE POINT FUNCTION IN LINE 70 DETERMINES WHETHER THE PIXELS IN THAT SPACE ARE ON OR OFF AND PRINTS THE RESULTS IN AN 8 BY 8 MATRIX.

```
10 REM **POINT DEMONSTRATION**
20 INPUT "PRESS ANY KEY AND ENTER ";A$
30 PRINT AT 0,0;A$
40 PRINT AT 4,0
50 FOR Y=175 TO 168 STEP -1
60 FOR X=0 TO 7
70 PRINT POINT (X,Y);
80 NEXT X: PRINT : NEXT Y
90 GO TO 10
```

BY CHANGING THE LAST NUMBER IN LINE 60 TO 31, FOUR CHARACTERS CAN BE ENTERED AT A TIME.

THE NEXT EXAMPLE IS A VERY SIMPLE, STRAIGHTFORWARD ILLUSTRATION OF THE DEF FN STATEMENT. IT SHOWS HOW FUNCTIONS CAN BE DEFINED AND THEN USED IN A PROGRAM AS NEEDED.

```
10 REM **DEF FN DEMONSTRATION*
20 DEF FN T(A,B,C,D)=A+B+C+D:
    REM TOTALING ROUTINE
30 DEF FN V(A,B,C,D)=(A+B+C+D)/4:
    REM AVERAGING ROUTINE
40 DEF FN D(N)=INT (N*100+.5)/100:
    REM ROUNDING ROUTINE
50 PRINT "INPUT FOUR DOLLAR/CENT AMOUNTS"
60 INPUT A'B'C'D
70 PRINT TAB 16;A';TAB 16;B';TAB 16;C';TAB 16;D;TAB 16;"-----"
80 PRINT "TOTAL",FN T(A,B,C,D),,
90 PRINT "AVERAGE",FN V(A,B,C,D)
100 PRINT "ROUNDED AVERAGE",FN D(FN V(A,B,C,D))
```

(CONT. NEXT PAGE)

THE FOLLOWING EXAMPLE TRANSLATES
NORMAL CHARACTERS (WITH 8 BY 8
PIXELS) INTO CHARACTERS WHICH ARE
64 TIMES GREATER IN AREA.

```

10 REM CHARS MAP DEMONSTRATION
20 INPUT A$: PRINT A$
30 LET MAP=(PEEK 23606+256*PEE
K 23607)+CODE A$*8
40 FOR A=0 TO 7
50 LET P=PEEK (MAP+A)
60 IF P=0 THEN PRINT : NEXT A
70 FOR B=7 TO 0 STEP -1
80 PRINT INVERSE INT (P/2^B);"
";
90 IF INT (P/2^B) THEN LET P=P
-2^B
100 NEXT B: PRINT : NEXT A
110 GO TO 10

```

THIS FINAL EXAMPLE IS A PROGRAM
THAT SYNCHRONIZES THE PRINTING
OF LYRICS ON THE SCREEN WITH THE
NOTES OF THE TUNE BEING PLAYED.

```

5 REM ** WORDS AND MUSIC **
10 PRINT "ROW, ROW, ROW YOUR B
OAT": GO SUB 50
15 PRINT "GENTLY DOWN THE STRE
AM": GO SUB 50
20 FOR N=1 TO 4
25 PRINT TAB N*2;"MERRILY": GO
SUB 50
30 NEXT N
35 PRINT "LIFE IS BUT A DREAM"
: GO SUB 50
40 PAUSE 50: CLS : RESTORE : G
O TO 10
50 READ A: IF A=99 THEN PRINT
: RETURN
55 READ B: BEEP A,B: GO TO 50
60 DATA .75,0,.75,0,.5,0,.25,2
,.75,4,99
65 DATA .5,4,.25,2,.5,4,.25,5,
1.5,7,99
70 DATA .25,12,.25,12,.25,12,9
9
75 DATA .25,7,.25,7,.25,7,99
80 DATA .25,4,.25,4,.25,4,99
85 DATA .25,0,.25,0,.25,0,99
90 DATA .5,7,.25,5,.5,4,.25,2,
1,0,99

```

"T/S 2068 BASICS AND BEYOND" IS
A VERY GOOD BOOK. FOR THOSE WHO
HAVE GONE THROUGH THE BEGINNING
PHASE OF LEARNING SINCLAIR BASIC
AND WHO WISH TO MOVE BEYOND (TO
AN INTERMEDIATE LEVEL), THIS BOOK
IS AS GOOD OR BETTER THAN MANY ON
THE MARKET.

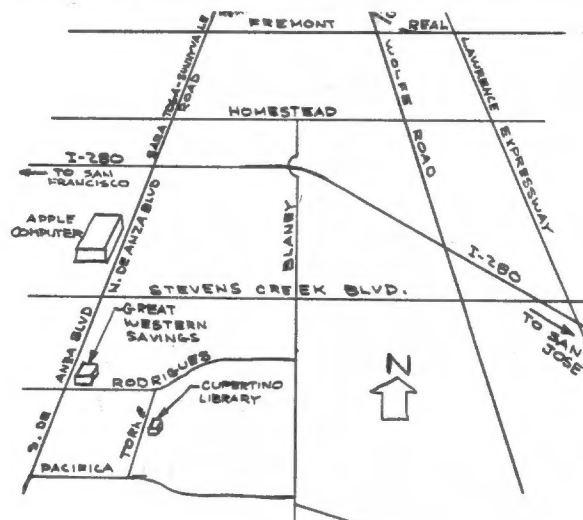
IT CAN BE PURCHASE FROM

SCOTT, FORESMAN AND COMPANY
1900 EAST LAKE AVENUE
GLENVIEW, ILLINOIS 60025

FOR A COST OF \$9.95.

WALT GABY

LOCATION OF SVSTUG MEETINGS



COMPUTER CALENDAR

AUGUST

- 18 Peninsula User Group 1:00 pm
- 22 East Bay Z80 User Group 7:30 pm
- 25 Happy Hacker Computer Swap
Nepredak Hall, 770 Trimble Road
Santa Clara 9:30 am to 4 pm
Admission: \$3
- 27 Silicon Valley User Group
Regular Meeting
Cupertino Library 7:00 pm
- 28 Silicon Valley User Group
Workshop Meeting
Great Western Savings
10250 S. De Anza Boulevard
Cupertino 7:00 pm

SEPTEMBER

- 5 3rd Personal Computer Faire
to Civic Auditorium and Brooks Hall
7 San Francisco 10 am to 6 pm
One Day Tickets: \$10
- 7 Bay Area Computer Swap
San Mateo County Fairgrounds
San Mateo 10 am to 5 pm
Admission: \$5
- 14 Computer Swap America
Santa Clara County Fairgrounds
San Jose 10 am to 6 pm
Admission: \$5
- 15 Peninsula User Group 1:00 pm
- 24 Silicon Valley User Group
Regular Meeting
Cupertino Library 7:00 pm
- 26 East Bay Z80 User Group 7:30 pm

E B Z U G EAST BAY Z80 USER GROUP
654 40TH STREET
RICHMOND, CALIFORNIA 94805
(415) 234-3310

PRESIDENT: RICK LINK

MEETINGS: FOURTH THURSDAY OF EACH MONTH, 7:30 P.M.
WEST BRANCH LIBRARY
1125 UNIVERSITY AVENUE (NEAR SAN PABLO AVENUE)
BERKELEY

MAKE CHECK FOR DUES PAYABLE TO "WOODY MCPHEETERS".

P U G PENINSULA USER GROUP
263 GATEWAY, NO. 107
PACIFICA, CALIFORNIA 94044
(415) 359-3198

PRESIDENT: GEORGE MOCKRIDGE

MEETINGS: THIRD SUNDAY OF EACH MONTH, 1:00 P.M.
PENINSULA HOSPITAL
1783 EL CAMINO REAL
BURLINGAME

MAKE CHECK FOR DUES PAYABLE TO "GEORGE MOCKRIDGE".

S V S T U G SILICON VALLEY SINCLAIR TECHNOLOGY USER GROUP
6675 CLIFFORD DRIVE
CUPERTINO, CALIFORNIA 95014
(408) 253-3175

PRESIDENT: RITA CARR, (408) 738-2888, X-4579

MEETINGS: NO REGULAR TIME OR PLACE FOR MEETINGS.
SEE COMPUTER CALENDAR FOR MEETING INFORMATION
OR CALL (408) 253-3175.

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THE TIMELINEZ NEWSLETTER IS A JOINT PUBLICATION OF THE THREE
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NEW MEMBERS AND VISITORS ARE ALWAYS WELCOME.

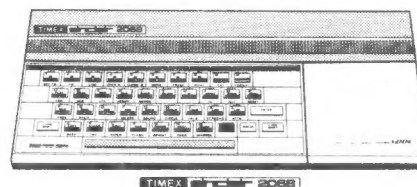
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PUG WORKSHOP

The September 15th meeting of the Peninsula User Group will host a workshop based on an article by Rex Lundgren in the June issue of TIMELINEZ. Rex has developed a simple method of improving the LOAD level capabilities of the 2068 computer.

Any Bay Area group member who wants to have his computer modified as described in the article is invited to attend the meeting. Pug will provide the required parts, tools and installers. Although the modifications are minor, we cannot take responsibility for the outcome. For directions to the PUG meeting call George at 359-3198.



BOOKS

Statistics and Programming 16K Timex/Sinclair 1000/1500/ZX81

- Basics of Timex Sinclair 1500/1000 BASIC 180 PAGES; \$7.00
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- New Book: Translating Programs into Timex Sinclair BASIC 190 pages; \$8.00
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- Programs available on 12 cassettes; \$20.00
- Comparison of Means: t-tests and Analysis of Variance 170 pages; \$11.00
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